



DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL  
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

August 1, 1975

STATINTL

[Redacted]  
Central Intelligence Agency  
Washington, D. C. 20505

Dear Bill:

Considering the racking the Agency is getting these days, it crosses my mind that you might be able to get some favorable attention by the judicious promotion of your study, "Potential Implications of Trends in World Population, Food Production, and Climate." As you see from the enclosed letter, I have been doing a little pushing for you.

The paper may be a bit dated. If I had not been so damned busy with minutiae when I discovered it last April, I would have called it to your attention earlier. It is a first-rate job on issues which truly deserve to be called crucial, unlike most of the transient things we get tied up about.

Regards,

*Lindsey*  
Lindsey Grant  
Director  
Office of Environmental Affairs

Enclosure

State Dept. review completed



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BUREAU OF OCEANS AND INTERNATIONAL  
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

July 31, 1975

Mr. Gerald Barney  
c/o Rockefeller Brothers' Fund  
30 Rockefeller Plaza  
New York, New York 10020

Dear Mr. Barney:

I recently tried a couple of ideas out on Bill Watts. He was much interested in them, but he did not believe that Potomac Associates is in a position right now to pick them up. He gave me your name and suggested that you might well be interested.

I should enter a disclaimer. Neither of these ideas is very closely related to my international environmental responsibilities, except that my work stands to gain indirectly with the growth of an environmentally oriented population. Professionally, I am not in a position to follow up on either proposal, but I think both of them would be valuable contributions to the literature on environment.

The first proposal is for a booklet exploring the comparative environmental costs of a megawatt of energy produced from conventional sources compared with nuclear generation. With the massive national debate shaping up over nuclear power, this type of popularization should be aimed at the intelligent layman. My hesitant inquiries suggest that remarkably little was done in this field until very recently. The FAS Public Interest Report has addressed the problem in several issues since the beginning of the year, in the process underlining the lack of solid information. Fortunately, some basic reference material is just beginning to appear, from which much of such a work could be drawn. The underlying study is the so-called MERES (Matrix of Environmental Residuals for Energy Systems), developed as a computer program by the Brookhaven Laboratory with sponsorship by the CEQ and other energy and environment departments of the Government. A print-out of much of this information is contained in a report prepared by Hittman Associates, Inc., for CEQ, NSF, and EPA, entitled "Environmental Impacts Efficiency and Cost of Energy Supply and End Use." A serious study, based upon these materials, was undertaken by the University of Oklahoma under the sponsorship of the same agencies plus ERDA, the FEA and the FPC and the Department of the Interior. It is entitled "Energy Alternatives: A Comparative Analysis," and it is or should shortly be available from the GPO. Unfortunately, these documents are such to be accessible to

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the policy-making official or the interested layman.

The second idea is for a handbook of the energy costs of daily activities, common staples, etc. How many BTU's are there in the Sunday paper, delivered? How many in a hot shower? In an hour's water skiing? Does it consume more energy to shave with an electric razor or a safety razor? (Bill Watts was surprised when I told him it was the latter.) The assembly of data for such a handbook presumably could be farmed out contractually. I would imagine that it would constitute an interesting project for a university environmental department. The target group would be high school environmental courses plus the large group of people with a vague interest in environment, who subscribe to the various environmental publications. The purpose would be the inculcation of environmental values into day-to-day decisions, in somewhat the same fashion that we train our children to make rational economic choices.

Incidentally, I am passing an unclassified CIA study to you with this letter. I gave one to Bill, and he thought you might find it interesting. It is tightly organized and well written, and it should have an impact akin to the one achieved by "The Limits of Growth." I assume that, in the present context, its authorship will not promote its sales, but it deserves more distribution than it has gotten. As you will note from the inside cover, copies can be obtained through the Library of Congress.

I hope that you are not overwhelmed by such a barrage of ideas from a total stranger. I rely on Bill's assurance that you would welcome thoughts from any quarter.

Sincerely,



Lindsey Grant  
Director  
Office of Environmental Affairs

Enclosure:

"Potential Implications of  
Trends in World Population,  
Food Production, and Climate"

cc: Mr. William Watts  
Potomac Associates

bcc: EPA - Dr. Stephen Gage

STATINTL

*BEST COPY*  
*Available*

20 AUGUST 1975

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# Sky-Spying—on Grain Crops

BY J. F. terHORST

WASHINGTON—The unexpectedly voracious Soviet appetite for American grain is not only boosting the price of wheat for American growers and affecting the price of bread for American consumers, it also has escalated the political significance of a modest government project for forecasting worldwide grain harvests by satellite.

One result, White House aides predict, is that President Ford will elevate the status and budget priority of the LACIE (Large Area Crop Inventory Experiment) program now being run in a routine manner by an Administration troika of the National Aeronautics and Space Administration and the Agriculture and Commerce departments.

What began as a low-budget scientific effort to improve harvest reporting services for the agriculture industry has thus taken on far-reaching domestic and foreign implications for the Presidency.

"If the LACIE system were ready today," a Ford adviser confided, "we wouldn't be so jittery about 1975 Soviet grain buying and the risk of adverse political fallout a la the 1972 grain deal. We would know what the Russian crop was likely to be, what they would be buying, and just how much of our crop we could afford to sell them."

Satellite forecasting could do more than that. It could also provide a way of accurately measuring a worldwide grain feast or famine each year, identifying the regions of big harvest and the areas of potential shortage—a vital tool for allocating the world's food supplies to meet the needs of growing world population.

In blunt terms, LACIE represents a U.S. effort to penetrate the iron curtain that Moscow, Peking and the capitals of other Communist countries still use to hide their harvest successes and failures.

Despite detente and a specific 1973 pact to exchange agricultural crop data, the Russians continue to shroud their all-important wheat and feed crop figures from the outside world. The only sources for U.S. experts are fragmentary accounts in Soviet newspapers and reports from the American embassy in Moscow. Indeed, trying to get accurate data on Soviet crop production is a key assignment for the Central Intelligence Agency. China,

the other big Communist grain country, figures that its annual crop picture is nobody's business but its own. Only the United States and Canada regularly publish their harvest statistics—and even then they cannot insure complete accuracy.

But crop forecasting by satellite is difficult. Unlike military-reconnaissance and weather-surveying satellites, aerial photographs do not yield much helpful data for LACIE. Instead, the system utilizes instruments aboard two earth-resource satellites to measure the reflections of sunlight on the fields below. The way green plants grow and then turn brown for harvest provides the clues that can measure the nature of a crop and its potential yield.

Unfortunately, the system is still so experimental that LACIE researchers don't quite know how to read the data they are collecting by satellite. To solve the riddle, they are matching satellite readings of the 1975 wheat harvest in the Western states against on-the-ground information provided by Agriculture Department crop specialists in the fields. But once this laborious, painstaking process is finished, LACIE scientists will have their yardstick for interpreting the reflected sunlight from the grain fields of the Soviet Union and China, and crops elsewhere in the world.

Satellite forecasting, by itself, is not better than on-the-spot reporting but merely an additional way of measuring crop potentials. In some areas of the world it is the only way for the United States to get any information. Yet the mysticism attached to all space projects tempts public officials to promise more than can be delivered by satellite technology.

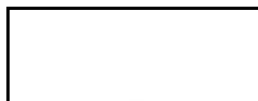
The mystery that clouds Soviet harvests and Kremlin grain-buying intentions from the White House could be penetrated by an expanded LACIE program. And Ford apparently has no intention of paying a political price at the polls in 1976 for another Russian "grain robbery."

If he needed a further goad, intelligence sources report the very strong possibility that the Russians already are secretly measuring American crops by satellite. If true, that could explain the confidence of Russian grain-purchasing moves this year. It also indicates an accelerated U.S. political need to play catch-up in this phase of the space race.

EPW  
NL  
HR  
PB

MEMORANDUM FOR: Ed

The attached draft reply mentions an idea for a food supply/demand monitoring group which I believe merits your consideration and, I would hope, further exploration. I attach a memo for you explaining what it is about.



DD/PR

Atts

Date 21 August 1975

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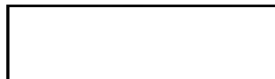
MEMORANDUM FOR: 

*DDI reaction to the monitoring group suggestion was that Agricultural would not participate and could defeat any such suggestion. Ergo - not a feasible idea.*

*Pls return pkg for file.*

*ifd*

*Thanks - Iguen -*



*Date 25 Aug 75*

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